The division of labor is as follows.

In the process of writing, Cheng Qian completed the information entropy, the advantages and disadvantages of analysis and conclusion part of the production and writing; Lingwei Cao completed the production and writing of the research background, current research status, research significance and research methods. Zhaoyang Tian completed data processing, grey correlation, principal component analysis and regression, weight determination method, linear regression, distance and bayes discriminant, the BP neural network, the production of XG Boosting algorithm and writing.

The following is the resume of guidance teachers and team members.

Hao Wu, associate professor, working from Tsinghua university. Education background: Doctor of applied mathematics, July 2009, Tsinghua university, tutor: professor Shi Jin. Bachelor of mathematics, July 2004, Tsinghua university. Work experience: associate professor in charge, department of mathematical science, Tsinghua university, December 2016-present. Associate professor, department of mathematical science, Tsinghua university, December 2013 to November 2016. Postdoctoral fellow, November 2009 to October 2010, faculty of mathematics, Paul sabati university (top 3 in Toulouse), co-advisor: Prof. Naoufel Ben Abdallah. Member of education committee and China association of industrial and applied mathematics, from December 2016 to now. Main awards: national outstanding doctoral dissertation nomination, academic degrees committee of the state council, 2012. First prize of outstanding young people's thesis, China association of computational mathematics, 2011. Young teachers teaching excellence award, Tsinghua university, 2017. First prize of the 8th Beijing college and university young teachers teaching basic skills competition, Beijing education committee, 2013.

Dianjun Wang, male, Han nationality, born in September 1960 in Shanxi Province, China. He received his bachelor’s degree of science in mathematics department of Shanxi normal university in January 1982. In July 1997, he received his doctor's degree from school of mathematics, Peking University. From August 1997 to July 1999, he was a postdoctoral fellow in mathematics department of Tsinghua university. From August 1999 to December 2006, he served as associate professor and professor of mathematics department of Tsinghua university, and successively served as group leader, deputy secretary of the party committee and secretary of the party committee of the graduate student working group of mathematics department. Since January 2007, he has been the President of the Tsinghua high school. Dianjun Wang has been working in the front-line of teaching and research in the university for a long time. He has given lectures on more than ten courses, including one excellent course from Beijing and one excellent course from Tsinghua university. In the past five years, the teaching evaluation of the main courses taught by Dianjun Wang ranks top 5% of Tsinghua university. He has completed nearly 10 scientific research projects such as the national natural science foundation of China, published more than 30 academic papers, edited and published two books each, and supervised 2 postdoctoral, 1 doctoral and 5 master's students. He has been awarded "Linfeng award" for outstanding instructor of Tsinghua university, "outstanding teaching achievement award of Tsinghua university", "outstanding teaching achievement award of young teachers of Tsinghua university", "outstanding teaching achievement award of Beijing", "education innovative model of Beijing", "outstanding teacher of Beijing" and other honorary titles.

Zhaoyang Tian, male, currently studying in Tsinghua High School. I achieved A on each subject in each term and have a strong physique. I scored the top 30 students in school. I was awarded the Honorable Mentioned prize in High School Mathematical Contest in Modeling (HiMCM) in November, 2017. I was awarded the first prize in mathematics, physics, and chemistry of grade 10 in National Mathematics, Physics, and Chemistry Competition for Middle School Students in 2018. I scored 118 and the top 1% in AMC12 in 2018 and 178 in AIME. I was awarded the first prize (Provincial round) of “Dengfeng” Cup math modeling competition held by Tsinghua University in March, 2018. I was awarded the second prize (Qualified round) and third prize (National final round) of “Dengfeng” Cup math modeling competition held by Tsinghua University in May, 2018. I scored the top 25% in algebra test and the top 40% in geometry test and awarded the second place in calculus test, the second place in power round, the eleventh place in guts round and the ninth place in overall team round in Asdan Math Tournament (AMT) on August, 2018. I participated in the CS Advanced Research Laboratory in Tsinghua High School from September, 2017 and finished the *Bring Eyes to The Blind -- A Reminder System for Identifying Traffic Lights* project with the help of PYTHON and ARDUINO and *Keyword Search and Binary Classification* project with the help of URLLIB, TENSORFLOW, JIEBA, and WORDCLOUD module. I was enrolled in Science Talent Program jointly organized by China Association for Science & Technology (CAST) and Ministry of Education of the P. R. China in 2018, finished *Similar News Synthesizing And Positive And Negative Evaluation* project and awarded outstanding student of the year.

Cheng Qian, male, currently studying in Tsinghua High School. I was cultivated with ability and moral through comprehensive personal improvement and development. I won the second place in Haidian District in High School Entrance Examination of 2017 with the score of 574. I also won the Qidi scholarship of Tsinghus High School in 2017. I was ranked among the top three in several examinations, and I was ranked the first in the final-exam of the first semester of Grade 10. I was the PE deputy in middle school, and commissary in charge of studies in high school. I was awarded the merit student and outstanding student leaders several times. Meanwhile, I participated and organized several school activities as the dias member of the Model United Nations club and the advisor of Shangdi school of Tsinghua High School. In addition, I took part in the oricplus summercamp organized by Tsinghua University in 2018. I was awarded the first prize in mathematics and physics of grade 10 in National Mathematics, Physics, and Chemistry Competition for Middle School Students in 2018. I received second prize in middle school math tournament in Beijing. I received first prize in math tournament of Grade 10 in Beijing. I received first prize in application math tournament of Beijing. I received the second place in geometry test, the second place in power round, the eleventh place in guts round and the ninth place in overall team round in Asdan Math Tournament (AMT) on August, 2018. I scored 124 and the top 1% in AMC12 in 2018 and 204 in AIME. I was awarded the Honorable Mentioned prize in High School Mathematical Contest in Modeling (HiMCM) in November, 2017. I was awarded the first prize (Provincial round) of “Dengfeng” Cup math modeling competition held by Tsinghua University in March, 2018. I was awarded the second prize (Qualified round) and third prize (National final round) of “Dengfeng” Cup math modeling competition held by Tsinghua University in May, 2018.

Lingwei Cao, female, currently studying in Tsinghua High School. I have outstanding academic performances in school, ranking top 20 (top 3%) in the whole grade. My English performances are especially excellent, with TOEFL score of 115, SAT score of 1540, and AP Calculus score of 5. Academic activities: July, 2018. Attend the ORIC+ Summer Camp (High School) ; July, 2017. Attend Stanford Pre-Collegiate Summer Institution, Logic and Problem-solving course. Awards: March, 2018. First Prize in Preliminary contest of Deng Feng Bei mathematical modeling competition; Second Prize in quarter-final of Deng Feng Bei mathematical modeling competition; Third Prize in final of Deng Feng Bei mathematical modeling competition; January, 2018. Municipal first prize in math subject of National Middle School Students’ Capacity Show; December, 2017. National first prize in 2017 National English Proficiency Competition for Secondary School Students (NEPCS); April, 2018. National third prize in Zhong Hua Sheng Tao Bei Middle School Students Writing Competition; May, 2018. No.8 (Top 10) in Algebra, the second place in power round, the eleventh place in guts round and the ninth place in overall team round in the ASDAN Math Tournament 2018; January, 2018. Honorable Mention in HiMCM; I scored 105 and the top 1% in AMC12 in 2018 and 178 in AIME.